

From: Peterson, Lance
To: [Sheldrake, Sean](#)
Cc: [BAYUK Dana](#)
Subject: Gasco - Seepage meter data gap investigation oversight - Monday September 4, 2017
Date: Tuesday, September 5, 2017 8:10:41 AM
Attachments: [Proposed seepage meter location map Summer 2017 Sampling Memo.pdf](#)

WORK ACTIVITIES CONDUCTED

Jason Silvertooth from CDM Smith was present to conduct safety and seepage meter installation oversight at the Gasco project area from 07:30 to 13:30 hours on Monday, September 04, 2017. The purpose of the site visit was to participate in the field event kickoff meeting, initial health and safety meeting, and to observe diving activities and in-water work. The objective of the work is to deploy seepage meters to evaluate groundwater seepage into the Willamette River adjacent to the Gasco site. The work was performed by NW Natural's contractors Anchor QEA, Coastal Monitoring Associates (CMA), and Research Support Services (RSS). The weather was sunny and smoky (due to wildfires in the region), with a high of approximately 90 degrees Fahrenheit.

At 07:30 hrs., the CDM Smith representative arrives at the Cathedral Park boat ramp, which is the designated meeting point for the project. Anchor QEA, CMA, and RSS are preparing the boats for the day's work. The RSS boat will be supporting the divers and all dive operations, and the CMA boat will be lowering the seepage meters into the water for the divers to deploy.

At 7:50 hrs., the field kickoff and health and safety meeting are conducted. Eric Parker (RSS) provides an overview of operations with input from Bart Chadwick (CMA), then describes safety associated with dive operations. Joe Smith (Anchor QEA) provides a site-specific health and safety discussion with input from Jason Silvertooth (CDM Smith). Also present at the meeting are the following personnel: Chris Smith (CMA), Alan Sims (CMA), Dale Dickenson (RSS), Viktor Gazarian (RSS), and Andrew Muth (RSS). The following topics are discussed during the meeting:

1. An overview of project schedule and activities is presented. CMA will lower the seepage meters into the water, and divers from RSS will conduct in-water operations to deploy the meters. There are 6 locations for the meters (GRD-01 through GRD-06), and the planned schedule is to deploy 2 each day Monday through Wednesday, then to collect two each day Thursday through Saturday. During deployment and collection of seepage meters, the RSS and CMA boats will be tied together and RSS will set anchors to hold the boats in the correct seepage meter locations.
2. Boat-specific hazards are discussed, and Eric points out potential trip hazards and pinch points. The location of first aid and safety equipment is identified, including the automated external defibrillator (AED), first aid kit, eye wash, fire extinguisher, and backboard.
3. Decontamination procedures are described, and the location of the decontamination zone, contamination reduction zone, and support zone are identified. The location of potable and river water rinsates are identified.
4. Communications from boat-to-diver, boat-to-boat, and boat-to-land are described. Communications with the divers will be tested prior to each new diver. The work site is in cellular range and communication to emergency personnel on land can be accomplished with cell phones.

5. PPE requirements for all site personnel are described. All personnel will have steel-toed rubber boots and safety glasses. Hardhats will be worn if there is an overhead hazard. All personnel contacting the diver, water, or any equipment that has not been decontaminated following use in the river will wear nitrile or rubber gloves.
6. Emergency procedures are discussed, including communication, transport vehicles on land (i.e., the Anchor QEA or RSS field trucks parked at the boat launch), and nearby hospitals.
7. The weather is forecasted to be very hot for the first 3 days of the project (Mon through Wed), and appropriate precautions to prevent heat-related illness are discussed. There is plenty of drinking water on the boats, all workers have hats, and sunscreen is provided. There is air conditioning in the RSS wheelhouse, and everyone will monitor each other for any signs of heat stress.
8. Work starts on Labor Day, and there may be increased recreational boat traffic due to the holiday. Everyone will keep watch of recreational traffic, and alert others if wakes are coming towards the boat.

Following the Health and Safety meeting, the CDM Smith representative verified that RSS had all necessary health and safety equipment, including a first aid kit, AED, fire extinguisher, and backboard. Photos were taken of each of these items to document their presence on the site. The AED was turned on to verify that it was operational. A photo was taken of the signed Anchor QEA HASP (signed by all personnel at the site).

At 08:10 hrs., a communication check is performed between the boats and with the divers.

At 08:50 hrs., arrive at location GRD-01 (see attached map for proposed locations). Prepare for seepage meter deployment and dive operations. Eric Parker (RSS) contacts the U.S. Coast Guard, Multnomah County Sheriff, and “all concerned boat traffic” on the Willamette to notify them of the diving operations. Joe Smith (Anchor QEA) contacts NW Natural to notify them we are starting work and determine if they have any planned vessel traffic.

At 09:30 hrs., the process of deploying the seepage meter at GRD-01 begins.

At 10:40 hrs., deployment of the seepage meter at GRD-01 is complete. During decontamination procedures, no visible sheen was apparent in the water or on the diver’s gloves.

At 11:15 hrs., arrive at seepage meter location GRD-03. Access to location GRD-02 was blocked by a boom, and this site will be returned to when the boom is removed.

At 11:40 hrs., the process of deploying the seepage meter at GRD-03 begins.

At 13:00 hrs., deployment of the seepage meter at GRD-03 is complete. A visible sheen is apparent on the surface around GRD-03. The water surface is sprayed to displace the sheen away from the boat when the diver is entering and exiting the water. No visible sheen is apparent on the diver’s gloves or suit during decontamination procedures.

At 13:30 hrs., arrive on shore and demobilize from the site for the day.

HEALTH AND SAFETY ISSUES

None noted.

ACTIVITIES DISCUSSED

Progress was achieved as scheduled, and the plan remains to deploy two meters each day Tuesday and Wednesday, then retrieve the meters on Thursday through Saturday.

PHOTOS

Refer to previous emails provided to EPA for photos of safety equipment and work progress.

Lance Peterson, RG, LHG

CDM Smith 14432 SE Eastgate Way, Suite 100 Bellevue, WA 98007

D: 425-519-8382 **O:** 425-519-8300 **C:** 425-417-5946

peterstone@cdmsmith.com www.cdmsmith.com